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Secretary for  
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# California Regional Water Quality Control Board San Diego Region

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**Supporting Document 2  
Item No. 13  
September 8, 2010**

## TENTATIVE ORDER NO. R9-2010-0057

### AN ORDER MODIFYING ORDER NO. R9-2009-0081 NPDES NO. CA0109185

### WASTE DISCHARGE REQUIREMENTS FOR THE UNITED STATES DEPARTMENT OF THE NAVY NAVAL BASE CORONADO SAN DIEGO COUNTY

### MODIFICATION OF “STEAM CONDENSATE”, “MAMMAL ENCLOSURE” “PIER BOOM”, AND “TCDD-EQUIVALENTS” REQUIREMENTS

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

#### INTRODUCTION

1. This Order provides factual and analytical evidence supporting the modification of the “steam condensate”, “mammal enclosure”, “pier boom” and “TCDD-equivalents” effluent limitations of Order No. R9-2009-0081.
2. On June 10, 2009, the San Diego Water Board adopted Order No. R9-2009-0081, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109185 (2009 Order), United States Department of the Navy (hereinafter Discharger or Navy), Naval Base Coronado, which establishes requirements for the discharge of industrial storm water and industrial waste water from the facility to San Diego Bay and the Pacific Ocean.
3. By letters dated January 25, 2010 and March 16, 2010, the Navy requested permit modifications to the 2009 Order, including changes to the requirements for steam condensate discharges, mammal enclosure discharges, pier boom cleaning discharges, and effluent limitations for TCDD Equivalents (dioxins and dioxin like compounds).

## STEAM CONDENSATE

4. The State Water Resources Control Board (State Board) adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975.
5. Order No. R9-2009-0081 contains requirements from the Thermal Plan, which were based on the information submitted by the Navy in their report of waste discharge application for renewal of Order No. R9-2003-2008. The requirements are based on the definition of a new discharge in the Thermal Plan because the original application did not contain documentation that the discharge was an existing discharge. Therefore, the more environmentally conservative requirement based on a new discharged was used.
6. The Thermal Plan defines elevated temperature waste as *“liquid, solid, or gaseous material including thermal waste discharged at a temperature higher than the natural temperature of receiving water.”*
7. The Thermal Plan defines an existing and new discharge as follows:
  - a. **Existing Discharge** - Any discharge (a) which is presently taking place, or (b) for which waste discharge requirements have been established and construction commenced prior to the adoption of this plan, or (c) any material change in an existing discharge for which construction has commenced prior to the adoption of this plan. Commencement of construction shall include execution of a contract for onsite construction or for major equipment which is related to the condenser cooling system.  
*Major thermal discharges under construction which are included within this definition are:*
    - A. *Diablo Canyon Units 1 and 2, Pacific Gas and Electric Company.*
    - B. *Ormond Beach Generating Station Units 1 and 2, Southern California Edison Company.*
    - C. *Pittsburg No. 7 Generating Plant, Pacific Gas and Electric Company.*
    - D. *South Bay Generating Plant Unit 4 and Encina Unit 4, San Diego Gas and Electric Company.*
  - b. **New Discharge** - Any discharge (a) which is not presently taking place unless waste discharge requirements have been established and construction as defined in Paragraph 10 has commenced prior to adoption of this plan or (b) which is presently taking place and for which a material change is proposed but no construction as defined in Paragraph 10 has commenced prior to adoption of this plan.
8. By letter dated January 25, 2010, the discharger submitted new information documenting a number of dates of when the steam line had been installed and modified. The letter states that the following three large maps and property document

submitted to the San Diego Water Board on January 14, 2009 are authentic representations of the steam condensate system located at Naval Base Coronado.

- a. Navy property document referred to as the internet Naval Facilities Assets Data Store, or iNFADS, showing the steam system installation in 1945.
  - b. A 1957 2-page map with sections of where the steam condensate systems were installed with 1973 update.
  - c. A 1965 1-page map with sections of where the steam condensate systems were installed with a 1966 revision.
9. Thermal Plan states the thermal requirements for enclosed bay discharges as follows:
- a. **Existing discharges** - *Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses*
  - b. **New discharges** - *Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses. The maximum temperature of waste discharges shall not exceed the natural temperature of the receiving waters by more than 20 °F.*  
Thermal waste discharges having a maximum temperature greater than 4°F above the natural temperature of the receiving water are prohibited.
10. Sections 402(o)(2) and 303(d)(4) of the Clean Water Act (CWA) and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit; however, when new information is available, which was not available at the time the permit was issued, the limitations may be relaxed.
11. The Navy installed the steam system on July 1, 1945 prior to the adoption of the Thermal Plan on May 18, 1972. The steam condensate discharge is an existing discharge because it was an existing discharge that commenced prior to the adoption of the Thermal Plan (May 18, 1972).
12. The discharge of steam condensate with temperature in excess of 100°C meets the criteria of an elevated temperature waste because it is higher than the natural temperature of San Diego Bay, the receiving water.
13. The Thermal Plan Objective for new discharges of elevated temperature of “At no time shall any discharge be greater than 20 °F over the natural temperature of the receiving water” does not apply to the steam condensate discharge because the steam condensate discharge is not a new discharge.

14. This Order modifies Order No. R9-2009-0081 to incorporate the applicable Thermal Plan Objective for existing discharges of elevated temperature waste of "Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses." Federal NPDES program regulations [40 CFR 122.62(a)(2)] allow NPDES permit modification during its term when new information is received. The Navy's January 25, 2010, letter contains new information about the installation date of the steam system

## **MAMMAL ENCLOSURE**

15. Both potable and seawater are used in the cleaning of Mammal Enclosures located at the Naval Amphibious Base (NAB) at Naval Base Coronado Complex. High pressure heated potable water is used to remove fecal matter from deck areas within the mammal enclosures. Seawater obtained from San Diego Bay is used to clean decks leading up to and surrounding the Mammal Enclosures as well as Mammal Enclosure netting used by both the sea lions and dolphins. Mammal Enclosures are cleaned daily to provide a clean, sanitary environment for the mammals. No chemicals are used to clean the decks or netting.
16. High pressure cleaning of deck areas within the mammal enclosures is conducted approximately 2.0 hours per day discharging approximately 384 gallons per day. Decks leading up to and around the enclosures are cleaned daily with seawater for approximately 1.5 hours at a rate of 20 gallons per minute (gpm) or a total of approximately 18,000 gallons per day. Mammal netting below the water is cleaned with seawater as needed or an average of 1 hour per day at a rate of 250gpm or 15,000 gallons per day.
17. By letter dated March 16, 2010, the Navy requested removal of the "Marine Mammal Enclosure Cleaning" activity from the NPDES permit and submitted the following details regarding the marine mammal enclosure:
  - a. A maximum of five dolphins are trained at the NAB
  - b. The dolphins are able to live in both cold and warm waters.
  - c. Total weight of the dolphins per year is estimated at 1,750 pounds.
  - d. The total weight of feed at NAB in a calendar month (31 days) is approximately 3,255 lbs.
18. Title 40 Code of Federal Regulations (CFR), Part 122.24 and Appendix C of 40 CFR 122 contain the definition and criteria for determining whether an aquatic animal production facility is a point source discharge subject to the NPDES permit program. Federal courts have recently issued rulings that aquatic facilities, which do not meet the definition of a CAAP facility in 40 CFR 122.24, are not point source discharges and therefore are not required to obtain NPDES permit coverage. Most recently, on October 19, 2009, the United States District Court for the Western District of Washington issued a decision upholding the position that where a concentrated aquatic animal production facility falls below certain thresholds, they will not be considered "point sources" subject to NPDES permit requirements.

*Concentrated Aquatic Animal Production Facility (CAAPF) which are defined in 40 C.F.R. § 122.24 and Appendix C to Part 122.*

*Appendix C to Part 122—Criteria for Determining a Concentrated Aquatic Animal Production Facility (§122.24)*

*A hatchery, fish farm, or other facility is a concentrated aquatic animal production facility for purposes of §122.24 if it contains, grows, or holds aquatic animals in either of the following categories:*

*(a) Cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year but does not include:*

*(1) Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and*

*(2) Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.*

*(b) Warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:*

*(1) Closed ponds which discharge only during periods of excess runoff; or*

*(2) Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.*

*“Cold water aquatic animals” include, but are not limited to, the Salmonidae family of fish; e.g., trout and salmon.*

*“Warm water aquatic animals” include, but are not limited to, the Ameiuride, Centrarchidae and Cyprinidae families of fish; e.g., respectively, catfish, sunfish and minnows.*

19. The Facility contains approximately 1,750 pounds of warm/cold water species and uses a maximum of 3,255 total pounds of food during the month of maximum feeding. Thus, the Facility falls below the aquatic animal production and feeding thresholds described in 40 CFR 122.24 and Appendix C of 40 CFR 122 for point sources. Furthermore, the San Diego Water Board has determined that the Mammal Enclosure at the facility is not a significant contributor of pollution to waters of the U.S. and does not warrant a case-by-case designation as a CAAP point source discharge pursuant to 40 CFR 122.24(c). Based on these considerations the Facility does not meet the definition of a CAAP facility, and is not required to obtain NPDES permit coverage.
20. Although the discharge from the Facility does not require an NPDES permit, the San Diego Water Board is required to regulate the Facility as a nonpoint source discharge,

using the administrative permitting authorities provided in state law pursuant to the California Water Code. Order No. R9-2009-0081 serves as State Waste Discharge Requirements as well as an NPDES Permit. Order No. R9-2009-0081 requires the Navy to develop and implement a Best Management Practices (BMP) Plan for marine mammal enclosure cleaning discharges in Provision VI.C.3.b. Due to the nature of the activities associated with the discharges from marine mammal enclosure cleaning, it is impractical to collect and treat the associated wastewaters prior to discharge. In accordance with 40CFR122.44(k)(3) and (4), the marine mammal enclosure cleaning discharge will be regulated by this BMP Plan in lieu of numerical effluent limitations. Because it is impractical to collect an accurate representation of the discharges, the monitoring and reporting program is being revised to eliminate sample collection and analyses, but retain the annual log of marine mammal enclosure cleaning discharges.

21. Federal NPDES program regulations [40 CFR 122.62(a)(2)] allow NPDES permit modification during its term when new information is received. The Navy's letter dated March 16, 2010, contains new information about the mammal enclosure cleaning discharge.

#### **PIER BOOM CLEANING**

22. By letter dated March 16, 2010, the Navy reported that pier boom cleaning is conducted on an as-needed basis, but no more than twice each year. At the time of the last cleaning operation, September 2009, Navy environmental staff was on-site to observe and evaluate cleaning procedures and protocol. It was observed that the storm drains, in the vicinity of where the pier boom cleaning was about to take place, had been totally secured. Grates were removed and plastic was inserted into the drain. The grates were then replaced, securing the plastic, and an additional layer of plastic was placed over the grate. The plastic was held in place on all sides with gravel-filled bags as well as taped.
23. The Navy determined that no discharge to the receiving water was occurring and, therefore, no sampling was necessary. This change in protocol has been implemented and will be periodically reviewed during pier boom cleaning operations.
24. Pier boom cleaning should not be regulated under the permit because there is no discharge during pier boom cleaning. Federal NPDES program regulations [40 CFR 122.62(a)(2)] allow NPDES permit modification during its term when new information is received. The Navy's letter dated March 16, 2010, contains new information about the pier boom cleaning discharge. This Order removes reference to pier boom cleaning as a discharge, but maintains the BMP plan to prevent discharges.

#### **TCDD EQUIVALENTS (DIOXINS AND DIOXIN LIKE COMPOUNDS)**

25. Order No. R9-2005-0081 establishes effluent limitations and monitoring requirements for TCDD Equivalents for discharges into San Diego Bay and the Pacific Ocean. A Reasonable Potential Analysis was conducted to determine that effluent limitations are

required. By letter dated March 16, 2010, the Navy requested removal of these effluent limitations and monitoring requirements for TCDD Equivalents from Order No. R9-2009-0081.

26. The California Toxics Rule (CTR) promulgates criteria by US EPA for priority toxic pollutants necessary in the State of California to protect human health and the environment including criteria for 2, 3, 7, 8-TCDD (Dioxin). These federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act. San Diego Bay is an enclosed bay.
27. The EPA adoption of the CTR is published in the Federal Register (65 FR 31682-31719) as a final rule. The preamble to the final rule discusses criteria for 2,3,7,8-TCDD (Dioxin) (65 FR 31695-31696, Preamble F.3.a.). The preamble does not have regulatory authority. It states, in part, the following:

*...For National Pollutant Discharge Elimination System (NPDES) purposes, EPA supports the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies or TEQs in NPDES permits (see discussion below). For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limits for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme...*

*...EPA expects California to use a TEF [toxicity equivalency factor] scheme in implementing the 2,3,7,8-TCDD water quality criteria contained in today's rule. The TEQ and TEF approach provide a methodology for setting NPDES water quality-based permit limits that are protective of human health for dioxin and dioxin-like compounds...*

28. On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. The SIP section 3 states in part the following:

*The CTR includes criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). In addition to this compound, there are many congeners of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) that exhibit toxic effects similar to those of 2,3,7,8-TCDD. The U.S. EPA has published toxic equivalency factors (TEFs) for 17 of the congeners. The TEFs*

*express the relative toxicities of the congeners compared to 2,3,7,8-TCDD (whose TEF equals 1.0). . . .*

*Whether or not an effluent limitation is required for 2,3,7,8-TCDD in accordance with section 1.3 of this Policy, each RWQCB shall require (as described below) major and minor POTW and industrial dischargers in its region to conduct effluent monitoring for the 2,3,7,8- TCDD congeners listed above. The purpose of the monitoring is to assess the presence and amounts of the congeners being discharged to inland surface waters, enclosed bays, and estuaries for the development of a strategy to control these chemicals in a future multi-media approach.*

*Within one year of the effective date of this Policy, each RWQCB shall either (1) amend the NPDES permits, or (2) send a written request for the information pursuant to California Water Code Section 13267 or 13383, for NPDES permittees in their respective regions, requiring, for a period of three consecutive years from the date the permit is amended or the request is sent, that: (1) each major POTW and major industrial discharger monitor its effluent for the presence of the 17 congeners once during dry weather and once during wet weather each of the three years; and (2) each minor POTW and minor industrial discharger monitor its effluent for the presence of the 17 congeners once during dry weather and once during wet weather for one year during the three-year period*

29. The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan established a water quality objective for TCDD equivalents which are defined as the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors.
30. The Navy submitted dioxin and dioxin like compounds effluent data in their 2007 application for the 2009 Order. The data for these compounds were converted to TEFs and used in developing effluent limitations for Order No. R9-2009-0081 by completing a reasonable potential analysis (RPA) for discharges to San Diego Bay and the Pacific Ocean. Although the CTR, which is applicable to Naval Base Coronado discharges to San Diego Bay, requires effluent limitations only for one compound, 2, 3, 7, 8-TCDD (Dioxin), the RPA was conducted and effluent limitations established for all of the dioxin like compounds using the TCDD Equivalent approach contained in the Ocean Plan. This approach was used in response to the language in the CTR preamble which states that EPA expects California to use a toxicity equivalent factor scheme in implementing the 2,3,7,8-TCDD water quality criteria contained in the CTR.

31. The State Board and USEPA have not provided guidance on the discrepancy between the CTR preamble and the lack of criteria for TCDD Equivalentents in the table for paragraph (b)(1) of the CTR, except for the single dioxin compound, 2,3,7,8-TCDD.
32. The CTR does not require effluent limitations for TCDD equivalentents, dioxins and dioxin like compounds, for discharges to San Diego Bay because the CTR preamble does not have regulatory authority.
33. To correct a mistaken interpretation of the CTR, this Order contains a new RPA for 2,3,7,8-TCDD for discharges to San Diego Bay. The RPA for discharges to the Ocean correctly used the TCDD equivalent approach in the Ocean Plan and is not being modified by this Order.
34. Federal NPDES program regulations [40 CFR 122.62(a)(15)] allow NPDES permit modification during its term to correct technical mistakes, such as errors in calculation, or mistaken interpretation of law made in determining permit conditions. The San Diego Water Board mistakenly used the Ocean Plan TCDD equivalent approach to determining effluent limitations for discharges to San Diego Bay as well as the Pacific Ocean. The CTR includes a more appropriate approach which is applicable to San Diego Bay and includes effluent limitations only for the single compound, 2,3,7,8-TCDD. This Order modifies Order No. R9-2009-0081 to incorporate the correct RPA for discharges to San Diego Bay and removes the incorrect effluent limitations for TCDD equivalentents. In accordance with the CTR effluent monitoring for 2,3,7,8-TCDD will continue to required under this Order.

#### **OTHER FINDINGS**

35. The San Diego Water Board has notified the Discharger and all known interested persons of the intent to modify Order No. R9-2009-0081, NPDES No. CA0109185 to change the requirements for steam condensate discharges, mammal enclosure cleaning discharges, pier boom cleaning discharges, and TCDD Equivalentent effluent limitations.
36. The San Diego Water Board in a public meeting has heard and considered all comments pertaining to the proposed modifications to the NPDES Order.
37. Under Water Code section 13389, this action to modify an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21000-21177.

**IT IS HEREBY ORDERED**, that, the following changes shall be made to Order R9-2009-0081:

1. **Steam Condensate:**
  - a. Delete the steam condensate temperature effluent limitation in footnote 1 of Table 7 of *“At no time shall any discharge be greater than 20 °F over the natural temperature of the receiving water”* on page 20;
  - b. Delete *“Temperature”* row from Table 7 on page 20;
  - c. Add the receiving water limitation of *“A. Surface Water Limitation, 8. Thermal Characteristics, Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses”* on page 27; and
  - d. Change the Fact Sheet to reflect the above modifications.
2. **Mammal Enclosure Cleaning:**
  - a. Delete *“and marine mammal enclosure cleaning”* from III.C on page 18;
  - b. Delete section IV.I of Attachment E – Monitoring and Reporting Program (Effluent Monitoring for Mammal Enclosure Cleaning) on page E-15; and
  - c. Change the Fact Sheet to reflect the above modifications.
3. **Pier Boom Cleaning:**
  - a. Delete row *“BW-001”* from Table 2 on page 3;
  - b. Delete existing text for footnote 1 from Table 2 and replace with *“[NOT APPLICABLE]”* on page 7;
  - c. Delete *“BW-001”* from II.B.Facility Description on page 11;
  - d. Delete *“BW-001”* from Table 5 on page 13;
  - e. Delete row *“BW-001”* from table E-1. Monitoring Station Locations on page E-4;
  - f. Delete section IV.C.1 of Attachment E – Monitoring and Reporting Program (Effluent Monitoring for Pier Boom Cleaning) on page E-8; and
  - g. Change the Fact Sheet to reflect the above modifications.
4. **TCDD Equivalents:**
  - a. Delete *“TCDD-Equivalents”* row from Table 7. Effluent Limitations for Steam Condensate on page 20;
  - b. Delete *“TCDD-Equivalents”* row from Table 8. Final Effluent Limitations – Discharge Point Nos. CW-001 and CW-004 on page 21;
  - c. Delete *“TCDD-Equivalents”* row from Table 11. Interim Effluent Limitations for Steam Condensate on page 23;
  - d. Delete *“TCDD-Equivalents”* row from Table 12. Interim Effluent Limitations for Diesel Engine Cooling Water discharges to San Diego Bay on page 23; and
  - e. Change the Fact Sheet to reflect the above modifications.

**5. Minor Administrative Changes:**

- a. In the first sentence of section VI.C.2.a.ii. Accelerated Toxicity Testing and TRE/TIE Process, change “(Attachment E, section V.E)” to “(Attachment E, section V.A.5.)” on page 32; and
- b. In the first paragraph of II.M. Stringency of Requirements for Individual Pollutants, change “discussed in section IV.B.2.” to “discussed in section VI.C.3.” on page 15.

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on September 8, 2010.

T E N T A T I V E

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David W. Gibson  
Executive Officer